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DISCUSSION

Dr Amy Reed (Cincinnati, OH). Were you able to look at the asymptomatic vs symptomatic indication for carotid endarterectomy and particularly look at how those high-risk patients did? There have been studies that have shown that that is a particular area where patients don't do well and whether or not best medical management might be better.

Dr Jeanwan Kang. The information that is available in the NSQIP database is a history of previous neurologic event. What we don't know is the laterality or the timing of that event, so we are not able to determine who underwent the surgery for symptomatic vs asymptomatic disease.

What we are able to determine from the database is a group of patient population who, for sure, is asymptomatic, mainly those with absolutely no previous neurologic event, and in those patients there was a slightly lower rate of stroke death rate, however it was not statistically significant.

Dr Hasan Dosluoglu (Buffalo, NY). I enjoyed the talk and a wealth of information from the private NSQIP data is going to start coming out. I am surprised that 80% of the patients had actually general anesthesia. As a local anesthesia user for this procedure, I am surprised at that. Did the high-risk patients have different outcomes in those who had a general anesthesia vs local anesthesia? And second, maybe the high-risk patients were not too high risk, because they could undergo general anesthesia in those who had general anesthesia.

Dr Kang. To answer your first question, because the percentage of patients undergoing local anesthesia was less than 20%, that came out to about a little over 600 patients undergoing carotid endarterectomy under local anesthesia, so any sort of subanalysis became meaningless because the numbers were so low.

The criteria for high risk were the same as that defined by the SAPPHIRE study and there were about 30% of patients who met these criteria. In addition, ASA [American Society of Anesthesiologists] class for each patient is available in the NSQIP database. I have not shown these data here, but patients who were ASA class 3 or 4 made up majority of the patient population.

Dr Anton Sidawy (Washington, DC). We analyzed the VA NSQIP data. There were over 20,000 carotid endarterectomies. Although there was no significant difference in neurologic outcomes based on different levels of renal insufficiency, 30-day

mortality and pulmonary, cardiac, and infectious complications were significantly increased. Have you adjusted your data for renal failure?

Dr Kang. It certainly was. For stroke, renal failure was not one of the variables that came out to be significant on univariate analysis. And we looked at renal failure in many different ways. We looked at it as a categorical variable as well as continuous variable. We also calculated GFR and none of that made a difference in terms of univariate analysis for stroke.It was, however, one of the variables that came out to be significant for death. However, on multivariate analysis, it was not one of the independent predictors of death.

Having said that, the number of deaths that were studied in our study were only 26; and so therefore, we could only say that two of the highest, most significant variables on this multivariate analysis were significant predictors of death.